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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/567,855	09/11/2006	Eusthassios Ioannides	1019219-000029	7335

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BUCHANAN, INGERSOLL & ROONEY PC  
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EXAMINER
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HANNON, THOMAS R

ART UNIT	PAPER NUMBER
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3656

NOTIFICATION DATE	DELIVERY MODE
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03/31/2009

ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

ADIPFDD@bipc.com

<b>Office Action Summary</b>	<b>Application No.</b> 10/567,855	<b>Applicant(s)</b> IOANNIDES ET AL.	
	<b>Examiner</b> Thomas R. Hannon	<b>Art Unit</b> 3656	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-18 is/are pending in the application.  
     4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 February 2006 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
     a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. ____.                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>2/10/06</u> .   | 6) <input type="checkbox"/> Other: ____.                          |

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Figures 1 and 3 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g).

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: 16, 17.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

The disclosure is objected to because of the following informalities: On page 7, line 7, it is stated "shown in Figure 10, four cavities 9 having a length  $B_p$  have been applied". However, Figure 10 does not show four cavities, but only three.

Appropriate correction is required.

Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

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The abstract of the disclosure is objected to because of the inclusion of legal phraseology "said". Correction is required. See MPEP § 608.01(b).

Applicant is advised that should claim 3 be found allowable, claim 17 will be objected to under 37 CFR 1.75 as being a substantial duplicate thereof. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 13 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 13 depends from claim 11. Claim 11 includes the limitation of "said inlet and outlet being at a distance from any of the cavities". This requires plural cavities. Claim 13 sets forth "one and only one cavity" which contradicts the plural cavities of claim 11. A dependent claim must further define limitations of a previous claim, but must include all the limitations of the previous claim. Additionally, in line 2, "being positions" should be changed to --being positioned--.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

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(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 15, and 16 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Elsaesser et al. DE 19953576.

Claims 1, 4, 7-9, 11, 12, 14-16, and 18 are rejected under 35 U.S.C. 102(a) as being anticipated by Yasuda et al. US 6,802,650.

Yasuda discloses a sliding bearing comprising two opposite bearing surfaces (col. 3, line 40), which enclose a gap containing a lubricant film (col. 3, line 42), said bearing surfaces being moveable with respect to each other in a generally parallel fashion, at least one of said surfaces being provided with at least one cavity (2), said cavity having a depth which is at least equal to the lubricant film thickness, wherein at least one of the length and width dimension of the surface area of said cavity amounting to at least 100  $\mu\text{m}$  (col. 3, line 5). With respect to claim 4, note column 3, lines 57-59. With respect to claims 7 and 8, note column 5, lines 2-6. With respect to claims 9 and 15, see Figure 1A. With respect to claims 11, 12, 14, 18, the inlet and outlet with respect to each dimple is inherent in the structure of the surface. With respect to claim 16, note column 3, line 57.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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Claims 1-4 and 7-18 are rejected under 35 U.S.C. 102(b) as anticipated by, or in the alternative, under 103(a) as being obvious over Coppen US 2,631,905.

Coppen discloses a sliding bearing comprising two opposite bearing surface which enclose a gap containing a lubricant film. The bearing surfaces are moveable with respect to each other in a generally parallel fashion. One of the surfaces is provided with at least one cavity (a), the cavity having a depth and having a length and width dimension. Coppen discloses the lubricant film thickness as approximately one thousandth of an inch (column 1, lines 38-42), and discloses the depth of the cavity as ten times the running clearance. Coppen discloses the pocket extending two thirds the width of the shell or component. This corresponds, or would have been obvious to one of ordinary skill in the art as being a dimension greater than 5000  $\mu\text{m}$ . With respect to claims 7-18, the embodiments of Figures 1-4 and 8 encompass all the claimed limitations.

Claims 5 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Coppen US 2,631,905.

While Coppen discloses the Depth of the pocket which is approximately ten times the running clearance, but also discloses the recess being formed by a milling cutter of radius  $R/2$ , thus for a greater radius bearing, it would have been obvious to one of ordinary skill in the art that the recess may be of a greater dimension, including 20 to 50 times the lubricant thickness, as this is dependent on both the design of the lubricant thickness and the radius of the desired bearing.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thomas R. Hannon whose telephone number is (571) 272-7104. The examiner can normally be reached on Monday-Thursday (8:30-7:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard WL Ridley can be reached on (571) 272-6917. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Thomas R. Hannon/  
Primary Examiner, Art Unit 3656